

NOTES ON WESTERN ANTS
(HYMENOPTERA: FORMICIDAE)

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Recently found among my alcoholic collections were three nest series of *Myrmecocystus pyramicus* M. R. Smith which had been taken from an extensive sand dune area, near Hammett, Idaho, on April 10, 1932 and from a sand hill, near Twin Falls, Idaho, on October 4, 1932. The series include both males and females. At each station there were colonies of *M. mojave* Wheeler which also contained the winged castes.

My workers of *pyramicus* compare very favorably with paratypes of this species, which was described by Smith (1951, p. 91) from a sand area in Washoe County, Nevada, and also with Dr. Smith's description.

I have noted what I consider to represent the following distinctive differences between the sexes of *pyramicus* and *mojave*. In the male of *mojave* erect body hairs are abundant and comparatively short, thus giving a rather brush-like appearance to the surface; on the thorax they are longest on the scutellum. They cover all surfaces of the antennal scapes and the legs. On the gula they are sparse. In the male of *pyramicus* the body is very sparsely pilose. The hairs are long and those on the gula are both longer and more numerous than those on the gula of *mojave*. Hairs are absent from the scapes and from the legs except for the flexor surfaces. In the *mojave* male the petiolar scale is, in profile, rather low, very thick at the base, and moderately attenuated toward the apex. It is much thicker basally and also notably shorter than that of the *pyramicus* male. Viewed from the front, its apex is entire, directed upward mesally, and narrow. In *pyramicus* the petiolar scale, when viewed in profile, is comparatively high, much narrower apically than basally, and has a rather sharp superior border. In frontal view, the apex is wide, emarginate, and not directed upward mesally.

In the female of *mojave* the body pilosity is abundant. Hairs on the thorax are short. They are numerous on all surfaces of

the scapes and the legs. In the female of *pyramicus* body pilosity is sparse. Thoracic hairs are long. Hairs are absent from the scapes and on the legs they are confined to the flexor surfaces. The female of *mojave* is apparently a larger ant than that of *pyramicus*, if my series are any criterion for establishing such a distinction.

It is my opinion that the males and females of *pyramicus* possess characteristics which can be used not only to separate them from the comparable castes of *mojave* but also from the sexes of other known species in the genus.

My notes on the Idaho collections show that the workers of both species were foraging actively at 10 a.m. and 2 p.m. It would appear, then, that these species do not have nocturnal habits. All nests were marked by small, circular, sand craters.

In the region of Lacuna Dam, north of Yuma, Arizona, I have observed many adjoining nests of *Dorymyrmex pyramicus* (Roger) and the red and black form which is considered by Creighton (1950, p. 249) to be the subspecies *bicolor* Wheeler. Studies of my collections from the station mentioned, as well as some from Southern California, show distinctive and non-intergrading color differences. I believe the coloration of *bicolor* to be a stable genetic character which designates the population wherever it may be found. Therefore, I propose that *bicolor* be given full specific status.

At Laredo, Texas, from a nest marked only by a small entrance in sandy-gravelly desert, I collected a series of *Pheidole* which I was unable to place to species. Dr. Creighton, who kindly examined a sample, determined it as *macclendoni* Wheeler. My series consists of majors, minors, and intermediates. The majors fit well the original description (Wheeler, 1908, p. 450) of this caste of *macclendoni*, but they are quite unlike the figure (*op. cit.*, Pl. 27, fig. 36). My majors have both the pronotum and the postpetiole much more strongly transverse. Wheeler's figure appears to be one of a larger intermediate rather than that of a major. When Dr. Creighton examined, during the preparation of his 1950 monograph, the type series of *macclendoni* at both the Museum of Comparative Zoology and the American Museum of Natural History it seemed to consist of majors and minors together with a few specimens which could be considered as inter-

mediates. Thus *macclendoni* appeared to be only very weakly polymorphic. Dr. Creighton, therefore, used the largest specimens (considering them as majors) as a basis for his key characteristics. Inasmuch as the true major caste is now known objectively and is notably different from the intermediate, it is evident that Dr. Creighton inadvertently incorporated characteristics of the intermediate rather than those of the major into his key. The pronotum of the major bears transverse striae. Hence one's progress is stopped at couplet 45 of the key (Creighton, 1950, p. 166).

It appears likely that the majors of *macclendoni* were misplaced after Wheeler had described them but before the ant had been figured. One of the largest intermediates in the remainder of the type series was undoubtedly used for the illustration inasmuch as the agreement is accurate. Thus Wheeler described the major but figured an intermediate. The majors which were recently collected at the type locality of this strongly polymorphic species have resolved the confusion which has been associated with *macclendoni*.

The following records, which are essentially reports of range extensions, may be of interest.

Leptothorax tricarinatus Emery—Jacob's Lake, Arizona.

Pheidole dentata Mayr—Ft. Davis, Texas.

Ph. artemisia Cole—Portal, Arizona.

Ph. creightoni Gregg—Weed, California.

Literature Cited

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- WHEELER, W. M. 1908. The ants of Texas, New Mexico and Arizona. Bull. Amer. Mus. Nat. Hist. XXIV: 399-485. 2 pls.